

List of Acronyms

Acronym	Definition
AMSA	Association of Metropolitan Sewerage Agencies
ASDWA	Association of State Drinking Water Administrators
AWWA	American Water Works Association Research Foundation
AWWARF	American Water Works Association Research Foundation
"C"	Consequence
CBRN	Chemical, Biological, Radiological, and Nuclear
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
CDM	Camp Dresser & McKee
CIP	Continuous Improvement Process, Capital Improvement Plan, and/or Critical Infrastructure Protection
CIP ³	Continuous Improvement Process, Capital Improvement Plan, and Critical Infrastructure Protection
DBT	Design Basis Threat
EAP	Emergency Action Plan/Procedures
EOC	Emergency Operations Center
EPA	United States Environmental Protection Agency
EAP	Emergency Action Procedure
ERP	Emergency Response Plan
ERPC	Emergency Response Planning Coordinator
FEMA	Federal Emergency Management Agency
FOIA	Freedom of Information Act
ISAC	Information Sharing & Analysis Center
LEPC	Local Emergency Planning Committee
MDEQ	Michigan Department of Environmental Quality
NRWA	National Rural Water Association
"P"	Probability
"R"	Risk
RAM-W	Risk Assessment Methodology for Water
SCADA	Supervisory Control and Data Acquisition
SDWA	Safe Drinking Water Act of 1965 (42 U.S.C. 300 et seq.)
SOP	Standard Operating Procedures
"V"	Vulnerability
VA	Vulnerability Assessment
VSAT	Vulnerability Self Assessment Tool
WC	Water City
WEF	Water Environment Federation
WW	Waste Water

Glossary of Terms

<u>Term</u>	<u>Definition</u>
BIOTERRORISM ACT	Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (PL 107-188), which amends the Safe Drinking Water Act by adding section 1433. Section 1433a requires that certain community water systems conduct Vulnerability Assessments, certify to EPA that the VAs were conducted, and submit a copy of the VA to EPA. Section 1433b requires certain community water systems to prepare or revise Emergency Response Plans and certify to EPA that an Emergency Response Plan has been completed.
CAPITAL IMPROVEMENT PLAN (CIP)	Five-year plan to implement improvements to the water system.
CATASTROPHIC EVENT	Event that would disrupt the mission of the water supply.
CERTIFICATE OF COMPLETION	Statement showing completion of VA and/or ERP.
CONSEQUENCE MITIGATION	All the measures, including emergency response planning, engineering redundancy, contingency operations, etc., that reduce the consequences of a successful attack against a water system.
CONSEQUENCES	All the repercussions of the water system's failure to achieve its mission. Examples include effects on life and human health, financial effects on the utility or the region, loss of fire protection, etc.
CONTINGENCY PLAN	Detailed guide to assist personnel in responding in the event of an incident, a "What to do in the case of an Emergency".
COUNTERMEASURES (PROTECTION)	Physical protection systems and operational practices that reduce the vulnerability of system assets; Deterrence, detection, and/or delay tactics.
COUNTERMEASURES (RECOVERY)	Emergency Response.
CRITICAL ASSETS	Crucial or vital equipment, buildings, people, ect...
CRITICAL CUSTOMERS	Customers that if they loose water service, will cause great havoc for the public water utility, i.e. hospital, manufacturing facility, etc.
DELAY	Security measures used to slow, detain, or hinder an threat.
DETECT or DETECTION	Security measures used to discover or be made aware of a threat or security breach.
DETER or DETERRENCE	Security measures used to prevent or discourage a would be threat.

Glossary of Terms

<u>Term</u>	<u>Definition</u>
EMERGENCY ACTION PROCEDURE (EAP)	Plans, procedures, personnel, and equipment that can be utilized in the event of an intentional attack or natural disaster or to avoid or significantly lessen the impact on public health of an attack or disaster.
EMERGENCY RESPONSE PLAN (ERP)	Plans, procedures, personnel, and equipment that can be utilized in the event of an intentional attack or natural disaster or to avoid or significantly lessen the impact on public health of an attack or disaster.
FEDERAL SAFE WATER DRINKING ACT	The main federal law, by the USEPA, that ensures the quality of Americans' drinking water by setting standards for drinking water quality, and also oversees the states, localities, and water suppliers who implement those standards.
MALEVOLENT ACTS	Evil or harmful actions.
MICHIGAN SAFE WATER DRINKING ACT OF 1976	The MDEQ has primary enforcement authority in Michigan for the Federal Safe Drinking Water Act under the legislative authority of the Michigan Safe Drinking Water Act, including regulatory oversight for all water supplies.
MISSION	The primary goals of the water system.
PUBLIC HEALTH SECURITY AND BIOTERRORISM PREPAREDNESS AND RESPONSE ACT OF 2002	The events of Sept. 11, 2001, reinforced the need to enhance the security of the United States. Congress responded by passing the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (the Bioterrorism Act), which President Bush signed into law June 12, 2002.
PROBABILITY	Likelihood that someone will attack the water system.
PROTECTION SYSTEM	All the measures, including physical infrastructure, monitoring systems, and operational and managerial procedures, etc. that help protect the water system against the specific threats that system potentially faces. Full protection involves measures to deter the attack; the ability to detect an adversary before s/he succeeds in disrupting the system mission and the ability to delay the attacker sufficiently to allow law enforcement or others to respond and intercept the attacker(s) before disruption of the water system occurs.
RECOVERY	How to restore service after an incident has occurred.
RELATIVE RISK	The probability of an event in the active group divided by the probability of the event in the control group.
RESPONSE	The reply to an action or event.
RISK	Exposure to the chance of injury or loss; a hazard or dangerous chance.

Glossary of Terms

<u>Term</u>	<u>Definition</u>
SYSTEM CHARATERIZATION	The "Planning Stage".
THREAT	The person or persons who may wish to disrupt the water system's mission, in combination with their capabilities and access to equipment or tools for doing so. The threat could be an outsider or someone with insider knowledge.
THREAT SPECTRUM	Insiders, Outsiders, and Cyber Threats.
VULNERABILITY	A physical gap or operational or managerial lapse that potentially allows the threat (person) an opportunity to disrupt the mission, for example, by gaining access to critical assets.
VULNERABILITY ASSESSMENT (VA)	Water utility personnel need to systematically assess the relative risks to achieving the primary mission(s) of their water system as the result of malevolent acts from the adversaries against critical water system assets.
WEAKEST LINK	Determines overall system vulnerability.

Resource Listing

<u>Title</u>	<u>Resource Type</u>	<u>Author</u>	<u>Source</u>
Large Water System Emergency Response Plan Outline	Document	EPA	http://www.epa.gov/safewater/security/pdfs/erp-long-outline.pdf
Vulnerability Assessment Fact Sheet	Document	EPA	http://www.epa.gov/safewater/security/va_fact_sheet_12-19.pdf
Instructions to Assist Community Water Systems in Complying with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002	Document	EPA	http://www.epa.gov/safewater/security/util-inst.pdf
Guidance for Water Utility Response Recovery & Remediation Actions for Man-Made and/or Technological Emergencies	Document	EPA	http://www.epa.gov/safewater/security/er-guidance.pdf
Security Vulnerability Self-Assessment Guide for Small Drinking Water Systems	Document	NRWA	http://www.asdwa.org/mem_info/committees/cipinfo/6-02/5-31%20draft%20latestv3.pdf
Security Vulnerability Self-Assessment Guide for Small Drinking Water Systems Serving Populations between 3,300 and 10,000	Document	NRWA	http://www.asdwa.org/docs/2002/FINAL10KSystemVAtool111302.pdf
Rural & Small Water and Wastewater System Emergency Response Plan Template	Document	NRWA	http://www.asdwa.org/Web_Site
Asset Based Vulnerability Checklist for Wastewater Utilities	Document	AMSA	http://www.asdwa.org/
NEWWA Asset Software	Software	NEWWA	http://www.newwa.org/asset_software/
Utility Guide for Security Decision Making	Document	ASDWA	http://www.asdwa.org/
VSAT	Software	AMSA	http://www.vsatusers.com
NRWA Checklist Website	Weblink	NRWA	http://www.vulnerabilityassessment.org/
RAM-W 3 day Workbook	Document	Sandia	http://www.epa.gov/safewater/security/sandia_training.pdf

Resource Listing

<u>Title</u>	<u>Resource Type</u>	<u>Author</u>	<u>Source</u>
RAM-W Lite 2 day workbook	Document	Sandia	http://www.epa.gov/safewater/security/sandia_training.pdf

Vulnerability Assessment Report

Suggested Outline

Section 1	Title Page (system name, WSSN, address, population served, contact name)
Section 2	System Mission Statement/Objectives
Section 3	System Description/System Diagram (source, treatment, pumping, major transmission mains, storage, and standby power facilities; SCADA controls; chemical handling procedures; listing of critical customers; discussion of security countermeasures in place)
Section 4	Discussion of Major Consequences to Avoid
Section 5	Listing of Critical Assets/Single Points of Failure
Section 6	Potential Threats to the Water System (Insider/Outsider)
Section 7	Existing Security Countermeasures (Deter, Detect, Delay, Response) Measures in Place
Section 8	Major Water System Vulnerabilities/Risks (Determination of Relative Risk to Critical Assets from Potential Threats)
Section 9	Upgrades Needed and Proposed Timeline for Completion
Section 10	Certification Statement (letter to EPA, containing Signature of Contact Person)